Exhibit 1

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF NEW YORK

D. JOSEPH KURTZ, Individually and on behalf of those Similarly Situated, Plaintiff, vs. KIMBERLY-CLARK CORPORATION and COSTCO WHOLESALE CORPORATION, Defendants.	:	No. 1:14-cv-011420-JBW-RML

REBUTTAL EXPERT REPORT
OF
DENISE NEUMANN MARTIN

March 27, 2015

FILED UNDER SEAL

I. Summary of Assignment and Opinions

1. I was asked by counsel for Costco Wholesale Corporation ("Costco") to respond to the declaration filed February 27, 2015 on behalf of Plaintiff by Colin B. Weir ("the Weir Declaration").
2. Mr. Weir asserts in very general terms that he can use a statistical technique known as hedonic regression to calculate damages to the proposed class by estimating the difference between the value (purchase price) of the Kirkland Signature moist toilet tissue ("KS MTT") and "value of the Products had the [flushable] claim not been made."[1]
3. On the basis of my education and experience, as well as my analysis of the data and information provided in this matter, I reached the conclusions set forth below.
4. As detailed in the report I submitted in this matter on February 27, 2015 ("the Initial Martin Report"), and reiterated briefly below, no formulaic model (including the hedonic model proposed by Mr. Weir) can assess whether and to what extent individual KS MTT consumers relied on the flushable claim in making their purchasing decisions and whether and to what extent they were damaged as a result.
5. Even putting aside the need for individualized review, however, I find that Mr. Weir's proposed application of hedonic regression to estimate damages in this case is still critically flawed. Under fairly strict conditions, an hedonic model can be used to estimate the extent to which observed market prices for individual products are affected by the particular attributes of those products.[2] These conditions are not and cannot be met here. In particular, to use such a model to estimate damages in this case requires, first, that the model be well-specified and, in particular, that the attribute of interest (which Mr. Weir defines here as whether the package includes the claim "flushable"), as well as other product attributes that affect price and are correlated with the attribute of interest, can be both identified and quantified. Second, to reliably estimate damages here, it is crucial

[1] Weir Declaration, ¶15.

[2] Note that the hedonic model methodology as proposed by Mr. Weir can only estimate a common premium across purchasers, controlling for the product attributes specified in the model, but does not reveal what, if any, premium was paid by any individual purchaser in any individual transaction. Given that any such premium is likely to vary, even putting aside all of the other critiques of the approach presented in this report, the approach does not provide any means of determining the amounts that would be owed individual consumers.

that the products sharing the attribute of interest don't all also share any other attribute that affects price and is unique to these products of interest. Finally, to use the results of an hedonic regression to estimate or predict the price impact associated with an attribute requires that the market conditions underlying the prediction (here, a but-for world in which no MTT products were labeled as "flushable") can be assumed to be fundamentally unchanged from the market in which the prices that were used as inputs to the model were generated. As detailed below, the hedonic model proposed by Mr. Weir cannot be used to estimate damages to the proposed class in this matter because it fails to satisfy these required conditions.

6. First, the model as proposed by Mr. Weir is largely unspecified and speculative, and subject to bias. Despite the complexities associated with developing a fully-specified hedonic model, he offers only the assertion that such an approach exists and has been used in other dissimilar contexts.

   a. Mr. Weir's proposed model improperly defines the "flushable claim." As reflected in the Weir Declaration, the allegation is not that MTT are not flushable at all, but that they are not flushable "as marketed and advertised" and come with a "risk of harm" to plumbing, septic and sewer systems.[3] And, in fact, the evidence in this matter shows that many consumers were satisfied with the performance of the product. Plaintiff Kurtz testified that the product was used in his household without incident until he moved to a new residence.[4] In addition, many consumers were repeat purchasers of KS MTT and there have been few complaints about the product. Of

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[3] Weir Declaration, ¶2.

[4] *See,* Deposition of D. Joseph Kurtz, December 10, 2014, pp. 36-37:

"Q. How long did you live at 408 Quentin Road?
A. For four years.
Q. Did you use flushable wipes at 408 Quentin Road?
A. We did.
Q. Did you ever experience a plumbing incident related to flushable wipes at 408 Quentin Road?
A. We did not."

An investigation at Mr. Kurtz's new residence, 409 Quentin Road, showed that "root intrusion was found" that "could trap debris and cause a clog," as well as baby wipes that are "not flushable and would exacerbate the faults in the existing system and likely cause a blockage." ("Thornton Tomasetti Building Solutions, Kimberly-Clark/Costco Flushable Products Investigation," prepared by John T. Boyer, Sr., February 27, 2015, p. 6).

the REDACTED that purchased KS MTT between the time of the product's introduction in 2011 and the end of 2014, REDACTED .[5] The rate of complaints was even lower for the U.S. as a whole, REDACTED .[6] Any properly specified model, then, would not measure the price impact associated with KS MTT being labeled "flushable" as compared to existing non-flushable wipes, but would instead measure the price impact of the product allegedly not being as dispersible as it was marketed to be. Rather than solely capturing any price effect associated with the alleged overstatement of performance, Mr. Weir's proposed model will also capture the price impact associated with the improvement in dispersibility for MTT products that purchasers did receive relative to non-flushable wipes.

b. Mr. Weir very loosely describes the potential structure for the equation he would seek to estimate in this case, either ignoring or unaware of the many other considerations that would need to go into such a determination. He proposes, for example, that the model might be run in either a linear or a log-linear form, which would have different implications for his damages measure, but he offers no theoretical underpinning or empirical analysis to determine which model is appropriate in this case, if either.

c. He similarly lists a few variables that he might seek to include, including whether the product is labeled as flushable. However, he notes that he cannot offer an opinion about whether that claim, or any other attribute that he has listed, actually has an effect on the price of KS MTT and could not offer such an opinion without creating a model using an "iterative" process.[7] Moreover, while Mr. Weir can try to include and therefore control in his model for those objective attributes of moist wipes that can be identified and quantified using his proposed data REDACTED REDACTED these data won't allow him to fill in for attributes that are more subjective and affected by consumer perception REDACTED

[5] Declaration of Kim Babusik in Support of Costco's Motion to Deny Class Certification, February 27, 2015 (the "Babusik Declaration), ¶18.

[6] Babusik Declaration, ¶18.

[7] Weir Declaration, ¶40.

REDACTED These attributes are not reflected in the data on which he plans to rely, and he has offered no alternative sources or methodology for collecting such data. To the extent those attributes are correlated with the presence of a flushable claim on the label, and survey evidence as well as testimony in this case indicates they are, this inability leaves his proposed model subject to a statistical failure known as "omitted variable bias."[8] Any effect of these excluded attributes on price will be erroneously attributed to the presence of the flushable claim on the label.

d. Finally, Mr. Weir offers no claim that such a model would be reliable in this case, just the assertion that he could evaluate reliability after such a model had been created. However, as described in this report, even without creating such a model, there are many reasons it would not be expected to generate reliable results. Moreover, the statistics that Mr. Weir describes as useful in measuring "reliability" once he has generated a model, which he had not done at the time of his declaration, provide little substantive information on the subject.

7. Second, even if Mr. Weir could identify and quantify the attribute of interest, as well as those attributes that affect the price of MTT products and are correlated with this attribute, hedonic pricing fails in this context because some of those attributes are unique to MTT and distinct from the characteristics of non-flushable wipes, such as baby wipes.[9] As a result, the hedonic model cannot be used to estimate any price impact associated with the presence of the flushable label as distinct from the price impact of these other attributes. This problem occurs in two ways in Mr. Weir's proposed model, one that is true for all MTT, one that is specific to KS MTT:

a. Mr. Weir's proposed model cannot control for attributes apart from dispersibility that are embodied uniquely in MTT products. Both manufacturers and consumers (through their behavior and as recorded in surveys and testimony) note attributes that

[8] Omitted variable bias occurs when relevant explanatory variables are excluded from a linear regression model. In such a case, the coefficients on the variables included in the model may be biased. *See, e.g.*, Peter Kennedy, *A Guide to Econometrics*, (The MIT Press: Cambridge Massachusetts, Fourth Edition, 1998), Chapter 6.

[9] In this report as well as the Initial Martin Report, I use baby wipes as the example when discussing alternative moist wipe products. To the extent Mr. Weir would include in his model KS Daily Facial Wipes or KS Disinfecting Wipes, the two other wipes with the Kirkland Signature label available at Costco, the opinions expressed in this report and the Initial Martin Report would be unchanged.

are distinctive in MTT products, including, *e.g.*, the degree of moisture-absorption, the scent and the drape or feel of the product. Indeed, manufacturers and retailers consider MTT a distinct product category rather than a "flushable" version of an existing, non-flushable product. Consumers (including Plaintiff Kurtz) who did not plan to flush MTT purchased the product anyway, sometimes together with non-flushable wipes, evidencing the value of these other distinct MTT attributes. The hedonic tool cannot parse any price effect due to "the flushable claim" from the effect due to these other bundled attributes.

b. The "bundled attribute" problem is compounded for Costco, because there is insufficient variability in the KS product data for an hedonic model to distinguish any price effect associated with the flushable label from the effect of a wipe count/volume discount. As noted in the Initial Martin Report, the price difference between KS MTT (sold at Costco in packages with 600 wipes) and KS Baby Wipes (sold in packages of 900 wipes) is $0.003 (or 3 tenths of one cent) per wipe. Neither product is sold at Costco in packages with any other wipe count. As such, it is not possible using an hedonic model to distinguish the price impact of flushability from the impact of the smaller wipe count size in which the KS MTT product is available, as compared to KS Baby Wipes.

8. Third, hedonic regression also fails in this context because it is a valid tool for estimating the price impact associated with a product attribute only if the supply and demand conditions in the "but-for" world presumed in the model would be fundamentally the same as the market in which the hedonic model was estimated. For example, if only one, small manufacturer of a product had allegedly misstated the ingredients of its product, a properly-specified hedonic model might be used to measure the difference in price, on average, that would have been paid by consumers had its product not been labeled inaccurately. The change in the supply decision of that one, small manufacturer would not be expected to fundamentally alter the supply and demand conditions in the market. In the "but-for" world posited by Mr. Weir in this case, however, the market conditions would be significantly different because *none* of the MTT products would be labeled or marketed as flushable: 100 percent of the product supply would be altered. His hedonic model would be estimated using historically-observed prices for flushable and non-

flushable products in a world where all MTT was labeled as flushable, but he would be attempting to apply those results to measure damages as compared to a counterfactual world in which no MTT products were labeled as flushable. The hedonic model is not designed to be used and cannot be used reliably in such an application.

9. Finally, if the outcome of this litigation is that the products cannot be labeled or marketed as flushable, and the market for MTT ceases to exist or the prices of the remaining MTT products increase, consumers who purchased KS MTT because of attributes other than flushability will be worse off, as will consumers who purchased KS MTT because they were satisfied with the dispersibility and performance of the product more generally. Class conflict is created as a result, and the evidence indicates that the conflict would be significant. Survey data shows that a substantial portion of consumers (like Plaintiff Kurtz) purchase MTT for reasons other than flushability. In addition, the pattern of repeat purchasing and low rate of complaints about plumbing-related problems among KS MTT consumers is consistent with many consumers being satisfied with the product.

II. Qualifications

10. My qualifications include those presented in the Initial Martin Report. In addition, I was trained in econometric methods, including hedonic models, in both college and graduate school. I routinely use and have provided testimony requiring the application of econometric techniques including regression analysis in my work at NERA. An updated CV is attached as Exhibit A.

III. Materials Considered

11. The additional facts, data, and other materials that I have considered in preparing this report, in addition to those that I considered in preparing the Initial Martin Report, are included in Exhibit B.

IV. Overview of Mr. Weir's Proposed Approaches

12. Mr. Weir considered "whether it is possible to calculate damages on a class-wide basis in this case based upon Plaintiff's theories of liability and, if so, to provide a framework for the calculation of monetary damages suffered by the class of plaintiffs resulting from

false claims made by Defendants."[10] Mr. Weir did not consider liability issues. Nor did he attempt to consider any damages issues arising from alleged damage to sewage or septic systems from use of flushable wipes.

13. Mr. Weir discussed, at least in passing, three possible approaches to calculating damages:[11]
    a. "Statutory Damages (wherein consumers would be entitled to receive $50 per violation under New York General Business Law § 349)." Whether such an approach to damages would be relevant appears to be a legal issue, not an issue requiring the application of economics. I do not discuss this approach further.
    b. "Full Compensatory Damages (wherein consumers would receive a full refund for their purchases of the Products)." Whether this approach to damages can be used to generate meaningful compensation, rather than the rote application of a refund that is divorced from whether any harm occurred, requires some elements of economics. In general, any consumer who did not encounter actual damage to sewage or septic systems from use of flushable wipes is likely to have obtained some value from the use of flushable wipes. Whether and to what extent the product was used by the consumer, whether any clog or plumbing problems occurred and how quickly, the cause of such problems (including, as discussed in the Initial Martin Report, whether other products were also flushed and were contributing factors) and the degree to which consumers received value from the use of flushable wipes are matters that clearly require individualized review. Mechanical application of a full refund would certainly over-compensate many purported class members, if not all. I do not discuss this approach further.
    c. "Price Premium Damages (wherein consumers would receive the difference between the value (purchase price) of the Products and value of the Products had the claim not been made)." Almost all of the damages discussion in the Weir Declaration is devoted to this approach, so my Rebuttal Report concentrates on this approach.

[10] Weir Declaration, ¶2.

[11] Weir Declaration, ¶15.

14. Mr. Weir's "Price Premium Damages" approach is based on a comparison between actual prices and prices for the same products in a but-for world "had the claim not been made." More explicitly:

> In this litigation, price premium damages provide restitution to the Plaintiff Class as the difference between the market price of the Products and a measure of the market price that would exist but for the Defendants' unlawful, unfair or fraudulent business practices.[12]

15. The "unlawful, unfair or fraudulent business practices" are further defined as a product being "labeled in the Product name as being 'flushable'" when "the Products were, in fact, not 'flushable' as marketed and advertised" and, instead "the use of the Products, as directed, comes with without [*sic*] a risk of harm to homeowners' and municipalities' plumbing/septic/sewer systems."[13]

16. Mr. Weir asserts that an approach called "hedonic regression" can be applied to the data that he hypothesizes are (or will be) available and that such a regression can be used to calculate either a percentage premium or an absolute dollar premium for every MTT product at issue in this litigation.[14] He claims that hedonic regression appears to be an

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[12] Weir Declaration, ¶19.

[13] Weir Declaration, ¶2.

[14] Weir Declaration, ¶59. In ¶20 Mr. Weir also includes a footnote mentioning two survey techniques that he believes would allow estimation of the difference in price attributable to the flushable claim, namely contingent valuation and conjoint analysis.

Mr. Weir has not provided enough information to demonstrate that he could reliably use either method to determine the value consumers place on "the flushable claim" in this matter. Importantly, he has not shown that he would be able to separate out Plaintiff's claim that he was misled and present it as an attribute in a survey. In addition, such an analysis would suffer from the general drawbacks of such surveys, including lack of supply-side information and potential hypothetical bias.

First, valuations from conjoint analysis do not replicate marketplace conditions broadly because they rely solely on consumer preferences and thus exclude other supply-side factors that may influence actual prices in the market place. Damages should not be based on what consumers prefer to pay for certain attributes, but rather the price premium (if any) that they actually paid in the marketplace. Second, some literature finds that conjoint analysis is susceptible to hypothetical bias. In other words, bias may result because consumers are not actually purchasing the products they are asked about in the survey. Mr. Weir does not provide sufficient detail to address the potential for hypothetical bias. *See, e.g.*, Bryan Orme, *Getting Started with Conjoint Analysis: Strategies for Product Design and Pricing Research*, Research Publishers, LLC., (2010) , p. 26.

"'ideal' technique for calculating the price difference between the value of the Products with and without the 'flushable' claim."[15] Mr. Weir's proposed approach for calculating damages, then, explicitly assumes a but-for world in which KS MTT (and all MTT produced by other manufacturers) would continue to be sold but without being labeled as "flushable."

17. Mr. Weir describes some of the data already available to him, as well as some data that he asserts will eventually become available at later stages in this litigation. He concludes that "[t]he data necessary to conduct an hedonic regression analysis and damage calculation in this litigation are available."[16] Similarly, he states that "[t]he available data is sufficient to conduct the analysis that I have set forth in this declaration."[17] While Mr. Weir asserts that the available data are adequate for his analysis, he describes no attempt to use the available data or to run even a preliminary hedonic model to demonstrate this adequacy.

V. Overview of Hedonic Regression

18. Regression analysis is a statistical tool that estimates the relationship between a dependent (or explained) variable and one or more independent (or explanatory) variables. In the simplest regression models, this relationship is assumed to be linear, with the dependent variable "*Y*" explained in terms of one independent variable "*X*", a fixed constant term "α", and an unobserved error term "u", of the form:

$$Y = \alpha + \beta * X + u,$$

In particular, Mr. Weir has not indicated how any survey would incorporate the fact that KS MTT product (and, presumably, other MTT products) has undergone changes in the time since its launch in July 2011. These changes include, *e.g.*, a change in the dispersible product used in the manufacture of the product in early 2014 (the "Sigma" product vs. the "Buckeye" product), a change that affected both the dispersibility of the product as well as other attributes bundled with dispersibility. As such, survey responses from customers may not be able to parse any changes in product characteristics bundled with the change in dispersible production technology.

[15] Weir Declaration, ¶38.

[16] Weir Declaration, ¶47.

[17] Weir Declaration, ¶57.

where "β" measures the quantitative relationship between the dependent and independent variable in terms of units of *X*.[18] For example, the "*Y*" might be the grades that students received on an exam, which is what we want to explain, while the "*X*" could be the amount of time they spent studying, measured in minutes. The "α"estimated in such a regression would reflect the average grade for a student who had not studied, while the "β" would reflect the average increase in the grade on the exam for a student for each extra minute spent studying. Such a model would be unlikely to explain the variation in grades perfectly. For a given student, the "*u*" or error term equals the difference between the actual grade and the grade that would be predicted using the estimated equation.

19. The overall fit of the model can be measured as the "R-squared" statistic, which can be interpreted as the proportion of the sample variation in *Y* that is explained by the fitted regression line. The "adjusted R-squared" takes into account the number of explanatory variables included in the model.[19] A statistical test of whether any particular parameter estimate, or "β", from the model differs from zero can be performed using a "t-statistic." This statistic scales the parameter estimate of β by the standard error of β, where the standard error of β is an estimate of how precisely the parameter has been estimated.[20]
20. More sophisticated regression models will incorporate many independent variables. Each estimated β measures the average relationship between the particular independent variable and the dependent variable, holding all the other variables in the model constant.[21] Hedonic regression is one application of this more general regression approach, in which the dependent variable (or variable to be explained) is a set of observed transactions prices for a set of differentiated products, and the independent variables are the attributes of those products that are theorized to affect price.
21. The foundation for this approach comes from microeconomics, where the value or "utility" that a consumer derives from the purchase of a product is sometimes characterized as the utility derived from the combination of specific attributes that make up the product. So, for example, the utility that a consumer derives from the purchase of

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[18] *See, e.g.*, Jeffrey M. Woolridge, *Introductory Econometrics: A Modern Approach* (2000), Chapter 2.

[19] Woolridge (2000), pp. 79, 192-3.

[20] Woolridge (2000), pp. 58, 116-118.

[21] *See, e.g.*, Woolridge (2000), Chapter 3; Chapter 9.

a house may depend on many attributes, including: the number of bedrooms; the number of bathrooms; the size of the lot; whether it has central heating and air conditioning; whether it has a garage and, if so, the size of the garage; characteristics of the surrounding neighborhood; and potentially a host of other attributes. Given the preferences of an array of different consumers and the conditions governing the supply of the products, in theory, the prices observed for products in the marketplace can be described by an equation relating the price of each product to the attributes of that product.

22. Hedonic models are used for a number of purposes, such as developing inflation indexes and estimates of real estate values. For example, the U.S. Bureau of Labor Statistics uses hedonic models to create quality-adjusted price indexes for many categories of products, so that the effects of quality improvement or innovations in products are not mistakenly attributed to inflation.[22]

23. In an hedonic model for housing prices, for example, a set of observed transaction prices for houses is used as the dependent variable, with housing attributes theorized to affect the value of the house used as the independent variables.[23] The parameter estimate or "β" for an attribute—for instance, a two-car garage—would reflect the expected effect on the price of a house with such an attribute as compared to the price for a house that was identical in all other respects except that it did not have a two-car garage.

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[22] "The CPI uses hedonic quality adjustments in item categories that tend to experience a high degree of quality change either due to seasonal changes, as in apparel items, or because of innovative improvements and technological changes, as in consumer appliances and electronics." "Frequently Asked Questions about Hedonic Quality Adjustment in the CPI," http://www.bls.gov/cpi/cpihqaqanda.htm.

[23] *See, e.g.,* Jan de Haan and Erwin Diewert, "Hedonic Regression Methods." This paper was included as Chapter 5 in OECD et al., *Handbook on Residential Property Price Indices*, 2013, Eurostat, Equation 5.3. The authors present a typical hedonic equation for the logarithm of price of a product as a function of unknown parameters (the "β") to be estimated, observed characteristics of the product (the "z"), and a random error term (the ε):

$$\ln(p_n^t) = \beta_0^t + \sum_{k=1}^{K} \beta_k^t z_{nk}^t + \varepsilon_n^t$$

In this equation, the subscript *n* refers to a specific product, the subscript *k* refers to a specific attribute, and the superscript *t* refers to a specific time period. In this model, the natural logarithm of price (for a specific product in a specific time period) is related to the sum across the attributes of the product of the values used to measure the attributes and the parameters associated with the attributes, plus an error term.

24. Hedonic housing price models may be estimated in a "logarithmic-linear" regression. In such models, the natural logarithm of housing prices is used as the dependent variable. This mathematical transformation changes the interpretation of the βs, which now reflect the approximate percentage effect on price expected for a house with the attribute compared to an identical house without the attribute.
25. Proper application of this model requires that three specific assumptions hold.
    a. First, that the attributes of a product (in my example, a house) that affect its value and are correlated with the attribute of interest can be both identified and quantified.[24]
    b. Second, it is also essential that the products sharing the attribute of interest don't all also share any other attribute that affects price and is unique to these products of interest.[25]
    c. Third, using the results of such a model to predict the difference in price associated with a particular attribute requires that the market conditions underlying the

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[24] *See, e.g.*, Kennedy (1998), p. 94-95, on the problems r

> "In general, the OLS estimator of the coefficients of the remaining variables is biased. If by luck (or by experimental design, should the researcher be fortunate enough to have control over the data) the observations on the omitted variable(s) are uncorrelated in the sample with the observations on the other independent variables (*i.e.*, if the omitted variable is orthogonal to the included variables), the slope of the coefficient estimator will be unbiased; the intercept estimator will retain its bias unless the mean of the observations on the omitted variable is zero."

[25] If multiple explanatory variables are correlated for a product of interest—for example, if most of the houses in a sample dataset have both backyards and a fence—these two variables are considered to exhibit "multicollinearity." In the case of multicollinearity, "the variance of the [regression] estimates of the parameters of the collinear variables are quite large. These high variances arise because in the presence of multicollinearity the [regression] is not given enough independent variation in a variable to calculate with confidence the effect it has on the dependent variable," Kennedy (1998), p. 184. Kennedy goes on to explain on p. 185:

> "As another way of looking at this, consider the information that was cast aside. It consists of variation in the dependent variable explained by common variation in the two [collinear] regressors. If this common explanation were known to be due to one regressor rather than the other, the estimate of the two regressors' coefficients might have to be considerably changed. But the allocation of this common explanation between the two regressors is unknown. It is this uncertainty as to which variable deserves the credit for the jointly explained variation in the dependent variable that creates the uncertainty as to the true values of the coefficients being estimated and thus causes the higher variances of their estimates."

When explanatory variables are perfectly collinear (in the example above, if 100% of the houses have both a backyard and a fence), the model "breaks down for mathematical reasons" and cannot generate parameter estimates at all. (Kennedy, p. 183.)

prediction can be assumed to be fundamentally unchanged from the market in which the prices that were used as inputs to the model were generated. More specifically, an hedonic equation for prices of differentiated products reflects an equilibrium between "demand and supply conditions," and is only designed to be accurate for small changes in the underlying conditions.[26] More significant changes in market conditions will lead to changes in the hedonic price equations; an hedonic price equation estimated for one time period and with one set of market conditions cannot be used to predict prices for a different time period with different market conditions.

26. An example from the housing market is useful to understanding the importance of each of those assumptions more fully.

27. What an hedonic model can do: Suppose a homeowner wishes to predict the increase in the sale price she would receive for her house by renovating her one-car garage to a two-car garage. A dataset exists that includes sales prices for a set of houses in her neighborhood over the past year, as well as the attributes of each house that are expected to affect price. It is not the case that all houses with a two-car garage (and no houses with a one-car garage) also share another unique attribute, such as central HVAC. In this setting, the results of a properly specified hedonic model and, particularly, the β estimated for the two-car garage attribute (in comparison with the one-car garage attribute) can be used to predict the increase in the sale price the homeowner can expect as a result of the renovation. In this example, the dataset includes all attributes that affect price that might be correlated with the presence of a two-car garage, and the inventory of two-car garage houses don't all share another unique attribute, so the first two assumptions are satisfied. The homeowner would be adding one more two-car garage house to the inventory of two-car garage houses in the neighborhood, and reducing the inventory of one-car garage houses by one. It is unlikely that such a small change would

[26] For example, in de Haan and Erwin Diewert (2013), the authors state the following:

"The characteristics parameters β_k^t in [the referenced equations] are allowed to change over time. This is in line with the idea that housing market conditions determine the marginal contributions of the characteristics: when demand and supply conditions change, there is no a priori reason to expect that those contributions are constant (Pakes, 2003). Yet, it seems most likely that market conditions change gradually. Therefore, the simplifying assumption can confidently be made, perhaps only for the short term, that the characteristics' parameters (but not the intercept term) are constant over time."

affect market conditions in a significant way, so the third assumption is also satisfied, and it is possible to rely on the results of the hedonic model estimated using recent sales prices for houses to predict the impact of the renovation on price.

28. What an hedonic model cannot do: Now suppose the hypothetical is changed in a number of respects:

    a. First, suppose that the general "curb appeal" of the house also affects price, but that no index reflecting this attribute is available in the dataset. Suppose that the two-car garage houses happened to also be considered more attractive by consumers (that is, the two attributes were "correlated"), not because the second garage itself made the house look better, but perhaps because developers assumed that potential buyers seeking a house with a two-car garage would also be more interested in a house with "curb appeal" than other buyers and built accordingly. In this case, failing to include the "curb appeal" variable in the hedonic regression would bias the β coefficient estimated on the two-car garage attribute. That is, the model would suffer from "omitted variable bias" and the estimate of the β for the two-car garage attribute would be overstated, erroneously reflecting some of the impact of curb appeal.[27]

    b. Second, suppose that all houses with two-car garages also had parking available on the street while no houses with one-car garages shared this attribute. Even though the attribute of "on-street parking" could be quantified, it could not be included in the hedonic regression because it would be impossible for the model to distinguish the relative impact of the two-car garage attribute from the on-street parking attribute; the two attributes are "perfectly collinear." The best that could be done is to include only one of the attributes in the model and measure the combined effect of a two-car garage and on-street parking. Assuming that both street parking and the garage have value to consumers, using such a model to estimate the price impact of a two-car garage alone would necessarily yield an overstatement if the full estimated effect were (erroneously) attributed solely to the existence of a two-car garage.

    c. Finally, suppose a city ordinance was passed requiring that all two-car garage houses in the neighborhood be converted to one-car garages. The results of an hedonic

[27] *See, e.g.*, Kennedy (1998), p. 94-96.

regression estimated on sales prices prior to this ordinance would be useless in predicting the value of a house with a converted one-car garage, because the market would be entirely different than the one in which the sales prices used as inputs to that model had been generated. The supply of houses with one-car garages would increase sharply, while the supply of two-car-garage houses would disappear. In this new market, the price for houses with one-car garages might increase relative to houses with no garage at all. Attributes such as whether a house had on-street parking would likely take on additional importance. All of the βs that had been estimated in the hedonic model might change, particularly those related to parking options.

29. As will be shown below, the application of the hedonic model that is proposed by Mr. Weir to estimate damages violates each of the three key assumptions required for it to be properly applied. Consequently, his proposed model will not yield a reliable estimate of the difference in price between KS MTT as sold at Costco and the price of the same product without the "flushable claim."

VI. Application of the Hedonic Method Cannot Answer the Questions at Issue in this Litigation

A. No Formulaic Model, Including an Hedonic Model, Can Be Used to Assess Whether an Individual Consumer Relied on and Was Harmed by the Flushable Claim

30. As detailed in the Initial Martin Report, no formulaic model (including the hedonic model proposed by Mr. Weir) can assess whether and to what extent individual KS MTT consumers relied on the flushable claim in making their purchasing decisions and were damaged as a result.

a. First, the evidence in this matter shows that consumers (including Plaintiff Kurtz) purchased KS MTT for reasons other than flushability. Indeed, Mr. Kurtz testified that he continued to purchase the product after he no longer believed it to be flushable and no longer intended to flush the wipes, as did other MTT consumers surveyed.[28]

[28] Ugone Report, pp.17-20.

b. Second, no KS MTT or MTT of any kind was available without the flushable label. As such, even for those consumers who relied on the flushable claim, individualized review would be required to understand which of the many alternative moist wipe products available at a range of alternative prices would have been considered comparable so that a price differential might be computed. For example, while baby wipes may be considered as a potential alternative product for some consumers, REDACTED . Similarly, REDACTED

c. Further, the evidence suggests that many customers were satisfied with their purchase, with one indication being a pattern of repeat purchasing by REDACTED of KS MTT customers, and another being the extremely low rate of complaints by Costco customers REDACTED Individualized review would be needed to assess whether consumers experienced a clog or plumbing problem, and the costs associated with repairing any such problem. Given this evidence, it is not possible to show without individualized review which consumers in Plaintiff's proposed class relied on the alleged misstatements related to flushability when purchasing Defendants' products and, if so, to what degree.

31. Finally, the evidence shows that more than REDACTED of KS MTT consumers also purchased other flushable or non-flushable wipes, indicating that individualized review would be needed to assess the cause of any clog or plumbing problem.

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29 REDACTED

B. Mr. Weir's Proposed Application of an Hedonic Model Violates Three Assumptions Necessary for It to Yield a Reliable Estimate of Any Damage

32. Mr. Weir claims he can use an hedonic model to determine the difference in the price that consumers paid for KS MTT and the price they would have paid without the "flushable claim" (which he proposes to model using the presence of the word "flushable" on the label). He cannot rely on such a model to estimate damages, however, because three critical assumptions underlying the model's application are violated.

33. First, Mr. Weir's proposed approach is largely unspecified and speculative, and is particularly subject to omitted variable bias. His proposed model defines "the flushable claim" improperly and over-broadly, ensuring an overstatement in any estimated price effect. In addition, while he claims that he will have sufficient data to perform his analysis, as with the missing "curb appeal" attribute in the housing example above, the data on which Mr. Weir claims he will rely does not include MTT attributes that have been shown to be important to consumers and are correlated with whether the product bears a flushable label. The failure to include such attributes will cause his model to suffer from omitted variable bias, and his estimate of any damage to be further overstated.

34. Second, as in a market where all houses with two-car garages also have on-street parking, even if he could quantify all attributes, he does not have the data to distinguish between the effect of the flushable label on the price of KS MTT and the effect of attributes distinct from the dispersibilty that are valued by consumers and are uniquely available in MTT. As a result, any estimate of damages based on the price impact associated with "the flushable label" will over-compensate plaintiffs.

35. Finally, just as the price impact of a two-car garage estimated in a market with a significant inventory of two-car garage houses could not be used to measure the difference in price if *all* houses with two-car garages were converted to have one-car garages, the price impact of the flushable label estimated in a market in which many manufacturers were selling MTT labeled as flushable cannot be used to estimate the difference in price if *all* manufacturers had not labeled their MTT product as flushable. Mr. Weir cannot determine that "but-for" price using an hedonic model.

i. Mr. Weir's Proposed Model Is Unspecified, Rendering It Speculative and Subject to Bias

36. Mr. Weir's proposed model is virtually unspecified. Despite the complexities associated with developing a full hedonic model, he offers only the assertion that such an approach exists and has been used in other contexts. He gives no detail on how he would use the data that are available to him. He improperly defines the product attribute of interest. He does not offer any theoretical underpinning that would guide his decision regarding the structural form of the model, despite the fact that the decision has significant damages implications. He does not specify the product attributes for which he would attempt to control, investigate whether those are discernible from the available data, or consider the bias that would be introduced in his model without their inclusion. Without generating and testing such a model, he can offer no assurances that it will be statistically sound, and in this context there are many reasons to expect that it will not be.

37. Mr. Weir Gives No Detail on How He Would Use the Available Data: More specifically, Mr. Weir first devotes 11 paragraphs (¶¶47-57) in his report to describing the data available to him. For example:

> This [IRI] data set contains weekly sales data of flushable wipes, other wipes, and toilet tissue from February 2010 through January 2015 for the state of New York. The data contains information, by product/UPC, the Dollar and Unit Sales (both on a promotional and non-promotional basis), as well as brand, pack size, and other product information.[30]
>
> Online sales data has also been provided by Amazon.com. This data contains individual sales transactions, including sale price, units sold, brand, pack size and count, and the shipping state of the order. Similar data has been provided by Drugstore.com.[31]
>
> Defendant Kimberly-Clark has provided retail sales data from Neilsen [*sic*]. This dataset contains product pricing information broken down by retailer (*e.g.*, Kroger, A&P).[32]
>
> Defendant Costco has provided additional data. This data includes internal nationwide sales records including sale price, units sold, brand, pack size

[30] Weir Declaration, ¶49.

[31] Weir Declaration, ¶51.

[32] Weir Declaration, ¶52.

> and count, and the shipping state of the order for myriad wipe products. The production also includes additional IRI data which provides sales information (as discussed above) for four New York state submarkets, and nationwide.[33]

38. Mr. Weir provides no indication of how he plans to use these data. For example, in terms of geographies, it is unclear whether he would use data at the individual purchase level, such as for the Amazon and Drugstore.com data; at the national level, as for some of the REDACTED; at the New York state level (or for some areas within New York), as for some of the REDACTED; or at the retailer level (with no mention of geographies), as for the REDACTED . Nor does he state the time aggregation, if any, he proposes to use in his analysis (*e.g.*, individual transaction, weekly, monthly, quarterly, or annual).

39. Mr. Weir's Proposed Model Improperly Defines the "Flushable Claim": Mr. Weir proposes to use the presence of "flushable" on the label to proxy for Plaintiff's flushable claim. However, as noted above, the allegation described in the Weir Declaration is not that the products were not flushable at all, but that they were not flushable "as marketed and advertised" and that they came with the "risk of harm" to plumbing, septic and sewer systems.[34] The evidence in this matter indicates that most consumers who purchased KS MTT have not expressed any problems with the performance of the product. Of REDACTED in New York and New Jersey who purchased KS MTT between the time of the product's launch in July 2011 through December 2014, only REDACTED complained of a plumbing problem, a rate of REDACTED .[35] The complaint rate was similar in the U.S. as a whole REDACTED that purchased KS MTT registering a plumbing-related complaint.[36] Moreover, as noted in the Initial Martin Report, many consumers were repeat MTT purchasers. Mr. Weir's proposal to define the claim as a product that has "flushable" on the label, then, fails to recognize that the vast majority of the proposed class did not complain about the performance of the product, consistent with the risk of harm being substantially less than the risk of flushing wipes not labeled as flushable. But because Mr. Weir proposes to

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[33] Weir Declaration, ¶53.

[34] Weir Declaration, ¶2.

[35] Babusik Declaration, ¶18.

[36] Babusik Declaration, ¶18.

define the attribute of interest as the presence of the flushable claim on the label, and not a measure of the performance of the product in terms of flushability relative to what is alleged to have been claimed in marketing or advertising, his estimate of any average impact on price from the alleged misstatements would be necessarily overstated.

40. Mr. Weir Offers No Theoretical Underpinning to Guide His Decision Regarding the Structural Form of His Model: Mr. Weir very loosely describes the potential structure for the equation he would seek to estimate in this case, either ignoring or unaware of the many other considerations that would need to go into such a determination. For example, he notes that he might run a linear regression, where the model would seek to estimate a common premium in dollars, or a log-linear regression, where the model would seek to estimate a common percentage premium. Such a difference in specification would have a significant impact on the damages estimated, given the variability in price of moist wipes. As shown in the Initial Martin Report, the price for alternative baby wipe products, for example, is quite variable. Average prices ranged from under REDACTED to over REDACTED per wipe in the REDACTED for the New York, NY Market over the period from 2012 to 2014, for example. A similar analysis on the price of MTT products in that market also shows pronounced variability, with prices ranging from REDACTED to REDACTED per wipe over the period from 2012 to 2014, as shown in Figure 1 below. Figure 2, below, shows the ranges in prices for a single week ending April 7, 2013 with 2013 price range.

REDACTED

REDACTED

41. Moreover, in the Amazon data, which is available at the transaction level, there are more than 12,625 examples in which the same product was purchased on the same day at different prices and often at multiple different prices. Similarly, in the Drugstore.com data, approximately 4,700 such examples exist. If Mr. Weir were to use a model that attributes a constant dollar premium to "flushability," it would presume none of the difference in these alternative prices was attributable to the flushable label. Alternatively, if he were to use a model that generates a percentage dollar premium, it would presume that impact of the flushable label is proportional to the difference in these alternative prices. Mr. Weir has not articulated a theoretical foundation for which model he believes would be correct.

42. Mr. Weir Does Not Specify the Attributes to be Included, Investigate Whether They Are Available in the Data on Which He Will Rely, or Consider the Bias that Will Result if They Are Excluded: Mr. Weir lists only a few variables he might seek to include in his model, including whether the product claims to be flushable. However, he notes that he cannot offer an opinion about whether the flushable claim, or any other attribute that he has listed, actually had an effect on price of KS MTT and would be unable to offer such an opinion without creating a model using an "iterative" process.[37]

43. More specifically, Mr. Weir mentions some types of product attributes that he suggests "can be controlled for" to estimate his proposed model, including the following:

- "Flushable" claim;
- Brand;
- Package count/size;
- Tub vs. refill pack; and
- No Alcohol.[38]

44. Mr. Weir ignores the fact that at "brand" is not specified for all entries in the REDACTED, for example. The brand of the product is listed as "Private Label" for REDACTED product/weeks in the data from January 2012 through November 2014. It is not possible to distinguish the private label products of one retailer from those of another. To the extent these private label brands have a differential impact on price, Mr. Weir will not be able to control for that difference in his model.

45. Moreover, two types of attributes are missing from this list. First are those attributes that it might be possible to quantify and include as explanatory variables in an hedonic regression, including, for example, whether the packaging is resealable, whether the product contains aloe, and whether the product is fragrance-free.[39] Mr. Weir makes no mention of having checked to see if information about those attributes exists in the data on which he plans to rely. A review of the fields available in the REDACTED, for example, indicates that it is not always possible to determine the presence or absence

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[37] Weir Declaration, ¶40.

[38] Weir Declaration, ¶39.

[39] "Cottonelle® Fresh Care™ Flushable Cleansing Cloths, 504 Cloths," http://www.costco.com/Cottonelle%C2%AE-Fresh-Care%E2%84%A2-Flushable-Cleansing-Cloths%2c-504-Cloths-.product.100097009.html.

of these attributes from those fields. Mr. Weir has not described the method by which he would collect missing data on these more objective attributes, both for products as currently available, as well as for products as they may have existed in the past. Some important attributes may depend on labels or wording on product packages that change over time, for example, and he has not explained how he would be able to find this type of historical information.

46. Second, a number of other subjective attributes that consumers have identified as important are also missing, and no quantitative measure of these attributes would be available either in the data on which Mr. Weir proposes to rely or through research on products and product labels as they existed historically. For example, REDACTED

No data on these attributes exist for any of the many moist wipe products included in the data from REDACTED, Amazon, Drugstore.com and Costco on which Mr. Weir indicated he will rely.

47. Without the inclusion of these qualitative attributes, his model is likely to suffer from omitted variable bias. Specifically, if any of the variables that Mr. Weir cannot include in his model are correlated with the presence of the flushable label, the coefficient or "β" that is estimated on that attribute will pick up not just the effect (if any) of the flushable label but also the effects of these omitted variables.

48. Mr. Weir Can Offer No Assurances that His Model Will Be Statistically Sound and There Are Many Reasons to Expect It Would Not Be: Mr. Weir makes an incorrect statement concerning the "reliability" of econometric models:

> Hedonic regression (as with any regression) produces statistical measures, such as the R-squared statistic, the F-statistic, and T-statistic, all of which can be used to evaluate the reliability of the results of the study. These measures are objective, mathematical calculations produced mechanically by statistical software packages. Questions about the reliability or explanatory power of these models can be answered by examining these and other measures of reliability.[41]

[40] Ugone Report, pp. 11-20.

[41] Weir Declaration, ¶43.

49. "Reliability" is not a term of art in econometrics. If by "reliable" Mr. Weir means that, in this context, the model can be relied on for purposes of estimating and calculating damages, then these statistics provide little or no information on "reliability."
50. For example, as noted above, the R–squared statistic is indeed a mechanical measure of goodness of fit. A model that fits poorly should perhaps be suspect, although nothing in econometrics provides a bright line for what should be considered a poor fit rather than a good fit.[42]
51. More importantly, R-squared provides limited information on whether the right variables are included in the equation or whether appropriate estimation methods have been used. The adjusted R-squared statistic (mentioned in passing by Mr. Weir) is slightly more useful, because in measuring the goodness of fit it takes into account the number of variables used in the estimation, but it still provides limited information on whether the right variables and appropriate estimation methods have been used. The general problem with reliance on R-squared has been described often in the econometrics literature. For example:

> In general, econometricians are interested in obtaining "good" parameter estimates where "good" is not defined in terms of R^2. Consequently, the measure R^2 is not of much importance in econometrics.[43]

52. The equation F-statistic is similarly of limited value in judging this type of "reliability." Under the assumption that the right variables are included in the equation, that appropriate estimation techniques have been used, and that the equation error terms are independently and identically distributed normal random variables, the equation F-statistic provides information on whether the model is any better at explaining the observed variability in the dependent variable (in this case, the prices of the moist wipe products) than the simple average of those prices would be. Clearly, a model that is no better at explaining the observed values of a variable than the average of that variable should not be considered reliable. Just as clearly, however, an apparently "statistically significant" F-statistic calculated for an equation that fails to include the right variables or

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[42] William H. Green, *Econometric Analysis*, Seventh Edition, p. 45.

[43] Kennedy (1998), p. 27.

fails to use appropriate estimation methods cannot provide "reliable" information on whether the estimated equation should be used for any particular purpose.

53. The t-statistics for individual estimated coefficients in a regression equation are also of limited value in judging the "reliability" of Mr. Weir's damages model approach. Under the assumption that the right variables are included in the equation and that appropriate estimation techniques have been used, a t-statistic provides information on whether a given variable should be considered different from zero.[44] While an estimated impact on price that is not significantly different from zero is of limited, if any, value in estimating any damages, just because a t-statistic appears to be "statistically significant" does not mean that it provides "reliable" information on whether the estimated coefficient should be used for specific purposes. For example, if an equation fails to include the right variables or fails to use appropriate estimation methods, the coefficients and t-statistics will not be meaningful.

54. Mr. Weir makes no mention of concepts related to robustness. Loosely speaking, "robustness" in econometrics is related to the idea that the overall estimation results do not depend much on the specifics of the approach, so that one can have some confidence that some kinds of estimation biases have been avoided. For example, the "standard" approach to computing standard errors and t-statistics for estimated coefficients in a regression equation makes specific assumptions concerning the distribution of the error terms in the equation. "Robust" standard errors do not rely on those assumptions and instead use calculation methods that are not sensitive to whether those assumptions are invalid in some particular ways. As another example, the possibility of omitted variable bias can sometimes be investigated by estimating models over subsets of the data where some information about the omitted variable is available and then performing statistical tests of whether the results differ from those generated by the larger dataset. Mr. Weir's proposed approach does not include any such tests.

55. In sum, Mr. Weir's discussion of "reliability" is grossly overstated. He implies that his model's reliability can only be assessed after it has been created when, as proposed, it

[44] Appropriate interpretation of a t-statistic also requires either further assumptions concerning the distribution of the error terms or special calculation techniques that make it "robust" with respect to certain types of failures in those assumptions concerning the distribution of the error terms.

violates assumptions required for its results to generate reliable estimates of any damages. The standard statistics that he describes provide little or no information on that measure. While they might be able to show that some models are indeed poor, they would not be able to show that any model is, in fact, appropriate. Mr. Weir makes no mention of concepts related to robustness or stability, which are important when considering whether the right variables have been included in an equation and whether appropriate estimation techniques have been used.

ii. Mr. Weir Would Not Be Able to Isolate the Price Impact of the "Flushable Claim" Using an Hedonic Model

56. A second flaw with Mr. Weir's proposed model is the existence of MTT attributes that are bundled together with the "flushable claim" as defined by Mr. Weir and are distinct from the characteristics of baby wipes or other non-flushable wipes. This problem comes in two varieties: Mr. Weir's failure to consider and control for attributes apart from dispersibility that are embodied in MTT; and his failure to address the limited KS product offerings at Costco. As a result of these related problems, the hedonic model cannot be used to estimate any price impact associated with the presence of the flushable label as distinct from the price impact of these other attributes.

57. Mr. Weir's Model Cannot Parse the Price Impact of Attributes Unrelated to Dispersibility That Are Uniquely Embodied in MTT: MTT are fundamentally different products than non-flushable wipes, with different production processes, different product attributes, and different customer demand. The formulation of the applicator in each type of product is different, with different product specifications.[45] Nice-Pak company representatives have testified that dispersible material used to manufacture KS MTT applicators affects the degree of moisture-absorption of the dispersible material, and the drape or cloth-like feel of the product.[46] MTT and baby wipes are not a part of the same buying department within Costco, with MTT a part of the pharmacy over-the-counter department and baby wipes a part of health and beauty.[47]

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[45] The applicator is the non-woven material to which the liquid is added in the wipe product.

[46] Deposition of Jeff Hurley, January 29, 2015, pp. 56, 58-62.

47 Deposition of Kim Walior, February 13, 2015, pp. 15-16.

58. Consumer survey data also illustrates these fundamental differences. Nice-Pak executives provided statistics comparing consumer preferences for product characteristics of MTT as well as baby wipes. This data showed that over one-third of baby wipe users also purchased MTT wipes, indicating a difference in consumer perception and use of the product.

59. It is possible that these attributes, rather than the flushable claim, are some of the main reasons many plaintiffs purchased the product. Plaintiff Kurtz continued to buy KS MTT, along with KS Baby Wipes, even after he no longer believed that KS MTT was flushable and no longer intended to flush the wipes, indicating that he valued other attributes in KS MTT that were not available in the KS Baby Wipes. Our analysis of Costco data revealed that REDACTED that purchase MTT also purchase baby wipes, often on the same visit to Costco, so do not appear to view the two products as close substitutes or, at a minimum, value their differences sufficiently to purchase both. Survey data similarly shows that some consumers purchased MTT without the intention of flushing the product.[48]

60. Mr. Weir has not acknowledged the bundling of these attributes. However, this inextricable coupling between the word "flushable" and the physical characteristics of MTT—characteristics that are not shared by non-flushable products— means that no regression equation can be used to parse out the portion of a price impact, if any, attributable to the "flushable claim."

61. Mr. Weir's Model Cannot Distinguish the Effect of the "Flushable Label" on KS Products from Differences in Prices Due to Volume/Wipe Count: The "bundled attribute" problem is compounded for Costco, because there is insufficient variability in the KS product data for an hedonic model to distinguish any price effect associated with the flushable label from a wipe count/volume discount effect. As noted in the Initial Martin Report, the price difference between KS MTT (sold at Costco in packages with 600 wipes) and KS baby wipes (sold in packages of 900 wipes) is $0.003 (or 3 tenths of one cent) per wipe. Neither product is sold at Costco in packages with any other wipe count. While Mr. Weir acknowledges that controlling for "brand" may affect the price effect estimated for the flushable claim, it would be statistically impossible to control for

48 Ugone Report, pp. 11-20.

the impact of the KS brand on the flushable claim and also to control for its impact on the volume discount. As such, it is not possible using an hedonic model to distinguish the price impact of flushability from the impact of the smaller wipe count size in which the KS MTT product is available, as compared to KS Baby Wipes. If Mr. Weir were to attempt to merge the KS data with, *e.g.*, REDACTED DA, the model would not generate KS estimates *at all* unless Mr. Weir assumed either that the price effect associated with increased wipe count was the same for the KS products as for other non-KS MTT products, or that the price effect associated with the flushable claim was the same.[49] He has no basis for either assumption.

iii. Use of the Results of an Hedonic Model to Predict Price Differentials Requires that the Underlying Market Conditions Would be Unchanged, an Assumption that is Violated by Mr. Weir's "But-For" World

62. Mr. Weir proposes to use the β coefficient on the "flushable label" attribute to predict the price at which KS MTT would have sold without this label. Mr. Weir's counterfactual, however, is not that one, small manufacturer would have sold MTT without the flushable label but that *all* manufacturers would have sold MTT without the flushable label. It is not an appropriate application of an hedonic model to use the impact on average MTT price of the flushable label estimated in a market in which many manufacturers and retailers were selling MTT labeled as flushable and apply this measurement to estimate the difference in price from a market in which *all* manufacturers had not labeled their MTT product as flushable.

63. The historically-observed prices for flushable and non-flushable products that Mr. Weir proposes to use as inputs in his hedonic regression reflect the intersection of demand and supply for these products in a market where all MTT products were labeled as flushable. Any average price impact estimated for the flushable label attribute using Mr. Weir's proposed model is only valid to the extent that the same fundamental market conditions apply. This assumption is violated in the "but-for" world that Mr. Weir posits. The price

[49] That is, if Mr. Weir attempted to run a regression controlling for both the effect of the KS brand on "the flushable claim" and its effect on wipe count/volume, the model would simply drop all KS observations from the regression; the model would be "indeterminate" for these attributes.

impact of the flushable label estimated in a market in which many manufacturers were selling MTT labeled as flushable cannot be used to estimate the difference in price if *all* manufacturers had not labeled their MTT product as flushable.

64. For example, the costs of production of MTT would likely have been largely unchanged in the counterfactual since the product is presumed to be the same in all other respects, including the attributes bundled with flushability, described above. If demand for MTT products were lower because the products were not labeled as flushable, and at the same time costs were unchanged, some manufacturers may have elected not to enter market. This reduced supply may have led to an *increase* in price for the MTT products of the remaining manufacturers and/or an increase in price associated with other non-flushable products, given the change in supply of moist wipe products in the market.[50] The market change envisioned by Mr. Weir is dramatic, and his hedonic model cannot be used to reliably estimate the impacts of such a shock to the market. There is no reason to believe that the results of the hedonic equation that he proposes to estimate would be the same in the but-for world in which market conditions had changed significantly as in the actual world. The results of his model cannot be used to reliably estimate any price differential associated with the flushability label.

VII. Conflicts in the Proposed Class Would Require Individualized Review to Assess Reliance

65. If the class action were pursued successfully and MTT could no longer be sold, whether temporarily or permanently, or if manufacturers decided to exit the market for the "supply side" reasons discussed above, those consumers who purchased the product because of attributes that MTT embodies other than flushability, would be worse off. In addition, those consumers who purchased the product because it is flushable and were satisfied with the performance of the product would also be worse off. These consumers, then, would not want to pursue the class action, creating inherent class conflicts. The evidence in this case—from surveys, from the pattern of repeat purchasing and from the

[50] Had these manufacturers tried to reduce their costs by substituting away from the dispersible material, the product would not have been identical other than for the "flushable claim," which is what Mr. Weir sets out to measure, and consumers who purchased MTT on account of factors other than flushability would be worse off. We return to this issue in Section VII below.

low rate of complaints about plumbing problems amongst KS MTT consumers—indicates that many such consumers exist, in turn indicating that such conflicts would be material.

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66. My work in this matter is ongoing. I reserve the right to update the opinions offered in this report on the basis of new information that becomes available to me, including the rebuttal report submitted by Plaintiff's expert.

Denise N. Martin

Denise Neumann Martin
March 27, 2015

EXHIBIT A
DENISE NEUMANN MARTIN
Senior Vice President

Education

Harvard University
Ph.D., Economics, 1991
M.A., Economics, 1988

Wellesley College
B.A., *magna cum laude*, Economics and French, 1985
Honors: Phi Beta Kappa

Professional Experience

NERA Economic Consulting

2001-	Senior Vice President
1998-2000	Vice President
1994-1997	Senior Consultant
1991-1993	Senior Analyst

Harvard University

1986-1990	Teaching Fellow, Department of Economics Taught courses in Microeconomics and Industrial Organization at the graduate and undergraduate levels. Assisted senior honors candidates with theses. Awarded Danforth Prize in Teaching.
1986-1990	Research Associate, Department of Economics Projects included an investigation of the timing of international horizontal mergers, an evaluation of the effect of generic entry into the pharmaceutical market, and a comparison of technical efficiency across countries.

Urban Systems Research and Engineering/Economica, Inc.
1987-1988 Economic Consultant
Consulted on all aspects of government agency projects, including proposals and the design of survey instruments. Provided economic forecasts and technical support.

Federal Reserve Bank of New York
1985-1986 Assistant Economist, International Financial Markets
Analyzed Eurobond markets, interest rate swap markets, and US commercial banks' balance sheets.

Testimony (4 years)

Expert Report, In the United States District Court Southern District of California (San Francisco Division), in Betty Dukes, et al. v Wal-Mart Stores, Inc., 2015.

Expert Report, In the United States District Court Southern District of Florida (Fort Lauderdale Division), in Zenovdia Love, et al. v Wal-Mart Stores, Inc., 2015.

Expert Report, In the United States District Court Western District of Pennsylvania, in *The Goodyear Tire & Rubber Company v. Travelers Casualty and Surety Company and Travelers Indemnity Company*, 2015.

Expert Report, In the United States District Court Eastern District of New York, in *D. Joseph Kurtz, et al. vs. Kimberly-Clark Corporation and Costco Wholesale Corporation*, 2015.

Expert and Supplemental Reports, In the North Carolina Superior Court for Mecklenburg County, in *Radiator Specialty Group v. Arrowood Indemnity Company, et al.*, 2015

Expert Report, In the United States Bankruptcy Court for the District of Delaware, *In Re: Blitz U.S.A., Inc., et al.*, 2014.

Testimony and Expert Reports, In the United States Bankruptcy Court for the District of Delaware, *In Re: Specialty Products Holdings Corp., et al.*, 2012/2013.

Affidavit, in *Marvin Neil Silver and Cliff Cohen vs. IMAX Corporation, et al.*, Ontario Superior Court of Justice, 2012.

Rebuttal Report and Declaration, In the United States District Court District of Puerto Rico, in *Samuel Hildenbrand, et al. vs. W Holding Company, Inc., et al.*, 2012.

Deposition, In the Court of Common Pleas of Franklin County, Ohio, in *The Dispatch Printing Company vs. National City Corporation, et al.*, 2011.

Declaration, In the United States District Court for the Northern District of Georgia Atlanta Division, *In Re: Verso Technologies, Inc.*, 2011.

Testimony and Declaration, In the United States District Court Southern District of New York in, *Patrick Campbell v. Cellco Partnerships d/b/a Verizon Wireless, Inc., and Patrick Devlin,* 2011/2012.

Deposition and Reports in the United States District Court District of New Jersey, *In Re: Schering-Plough Corporation/ENHANCE Securities Litigation*, 2011.

Deposition and Reports in the United States District Court District of New Jersey, *In Re: Merck & Co., Inc., Vytorin/Zetia Securities Litigation*, 2011.

Declaration, In the Superior Court of the State of California County of Orange, Central Justice Center, in *Sheryce Corona and Karen York, et al. v. Hoag Memorial Hospital Presbyterian*, 2011.

Testimony and Expert Reports, In the United States Bankruptcy Court Southern District of New York, *In Re: Tronox Incorporated, et al. v. Anadarko Petroleum Corporation, et al.*, 2011/2012.

Expert Report, In the United States District Court for the Northern District of Alabama Eastern Division, in the matter of *Thsia Briggins, et al. v. Tri Staffing, Inc., Elwood Tri, Inc. and Honda Manufacturing of Alabama, LLC,* 2011.

Deposition and Expert Report, In the Superior Court of New Jersey, Morris County in the matter of *Fairfax Financial Holdings Limited and Crum & Forster Holdings Corp. v. S.A.C. Capital Management, LLC, et al.*, 2011.

Expert Report, In the United States District Court for the Northern District of Alabama Eastern Division, in the matter of *Cedric D. Burroughs, et al. v. Honda Manufacturing of Alabama, LLC,* 2011.

Publications and Presentations (10 years)

"Trends in Wage and Hour Settlements: 2013 Update," (co-author) NERA Monograph, November 2013.

"Trends in Wage and Hour Settlements: 2011 Update," (co-author) NERA Monograph, March 2012.

"Recent Trends in Wage and Hour Settlements," (co-author) NERA Monograph, March 2011.

"Data in Wage and Hour Litigation: What to Do When You Have it and What to do When You Don't," (co-author) NERA Monograph, November 2010.

"Get in the Game: The Latest News and Developments in Wage and Hour Litigation," presented at the *4th Annual Section of Labor and Employment Law Conference*, Chicago, IL, November, 2010.

"Why Daubert Makes Sense at Class Certification Under Title VII," (co-author) published in *Law 360*, July 9, 2010.

"The Economic Impact of New MMSEA Regulations," (co-author) published in *Law360,* April 14, 2010.

"The Economic Implications of Medicare Section 111 Reporting Requirements" presented at the *Asbestos Litigation Conference*, Beverly Hills, CA, February, 2010.

"Wage and Hour: Advanced Topics in Litigation," presented at Law Seminars International conference on Litigating Employment Class Actions, April, 2009.

"The Use of Economic Analysis in Predatory Lending Cases: Application to Subprime Loans," (co-author) NERA Monograph, November 2008.

"Forecasting Product Liability by Understanding the Driving Forces," (co-author) published in *The International Comparative Legal Guide to Product Liability*, 2006.

March 2015

Exhibit B
List of Materials Considered

- The Initial Martin Report, dated February 27, 2015, and all materials considered as listed in Exhibit B to the Initial Martin Report
- Expert Report of Dr. Keith R. Ugone, filed February 27, 2015
- 30(b) (6) Deposition of Costco Wholesale Corporation by Kim Walior, dated February 13, 2015
- Deposition of D. Joseph Kurtz, dated December 10, 2014
- Deposition of Jeff Hurley Pursuant To Rule 30(b)(6), dated January 29, 2015
- Declaration of Colin B. Weir, filed February 27, 2015
- Declaration of Kim Babusik in Support of Costco's Motion to Deny Class Certification, February 27, 2015
- Bryan Orme, *Getting Started with Conjoint Analysis: Strategies for Product Design and Pricing Research*, Research Publishers, LLC., (2010)
- Jan de Haan and Erwin Diewert, "Hedonic Regression Methods." This paper was included as Chapter 5 in OECD et al., *Handbook on Residential Property Price Indices*, 2013, Eurostat.
- Jeffrey M. Woolridge, *Introductory Econometrics: A Modern Approach* (South-Western College Publishing), 2000.
- Peter Kennedy, *A Guide to Econometrics*, Fourth Edition, (The MIT Press: Cambridge Massachusetts), 1998.
- William H. Green, *Econometric Analysis*, Seventh Edition (Prentice Hall), 2011.
- Attitude & Usage Study of the Baby Wipes Category, Report with Segmentation and Subgroup Analysis (Households with Children in Diapers and Heavy/Medium/ Light Users), June 2011
- "Thornton Tomasetti Building Solutions, Kimberly-Clark/Costco Flushable Products Investigation," prepared by John T. Boyer, Sr., February 27, 2015
- "Frequently Asked Questions about Hedonic Quality Adjustment in the CPI," http://www.bls.gov/cpi/cpihqaqanda.htm.
- "Cottonelle® Fresh Care™ Flushable Cleansing Cloths, 504 Cloths," http://www.costco.com/Cottonelle%C2%AE-Fresh-Care%E2%84%A2-Flushable-Cleansing-Cloths%2c-504-Cloths-.product.100097009.html.